ColumbiaGrid Update

Western Conference of Public Service Commissioners

June 16, 2008

Jeffrey Miller

Vice President and Manager of Planning

ColumbiaGrid

- Nonprofit membership corporation formed in 2006
- Independent Board (3 Directors)
  - Ed Sienkiewicz, Shelly Richardson, Lloyd Meyers
- Purpose is to improve reliability and the efficient use of the grid
- Accomplishes purpose by coordinating the use and expansion of participating systems through open and transparent processes.

Members/Participants

- Avista
- Bonneville Power Administration
- Chelan County PUD
- Cowlitz County PUD
- Grant County PUD
- Puget Sound Energy
- Seattle City Light
- Snohomish County PUD
- Tacoma Power
- Standing invitation to others

Offices Located near Portland Airport


ColumbiaGrid Staff
(left to right)
Gordon Comegys, PE., Senior Planning Engineer
Sharon Whitlow, Executive Assistant
Amy Johnson, Planning Engineer
Judy Welch, Administrative Assistant
Paul Arnold, P.E., Vice President
Tammy Beckwith, Planning Assistant
Jon Kruka, President/Chief Executive Officer
Judith Ember, Treasurer and Corporate Secretary
Not pictured:
Jeffrey C. Miller, PE., Vice President & Manager of Planning
Mary Landauer, P.E., Lead Senior Planning Engineer
Diedre (Dee) Rapisarda, Contract Accountant

Staffing Up

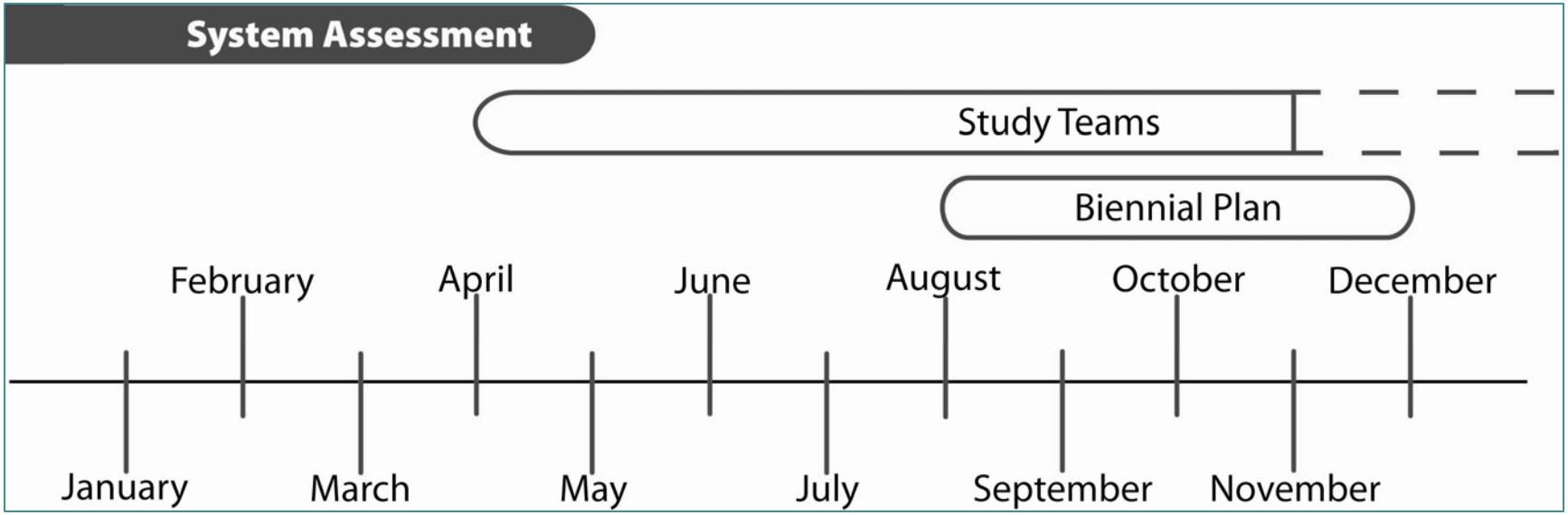
Activities

- Planning
- OASIS
- Outage Coordination
- Visibility
- Redispatch

Planning

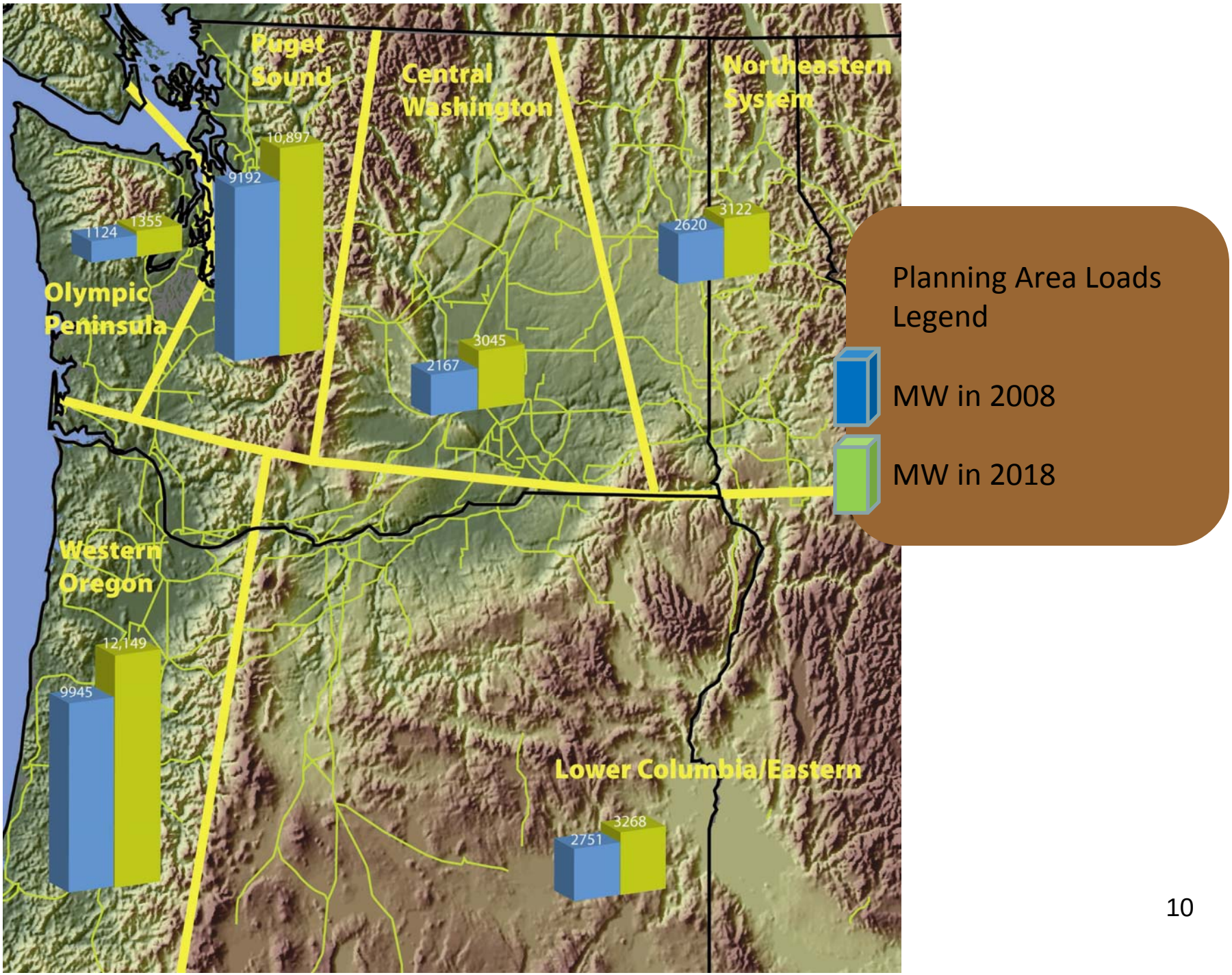
- ColumbiaGrid will complete its first Biennial Transmission Plan by the end of this year

Biennial Transmission Expansion Plan



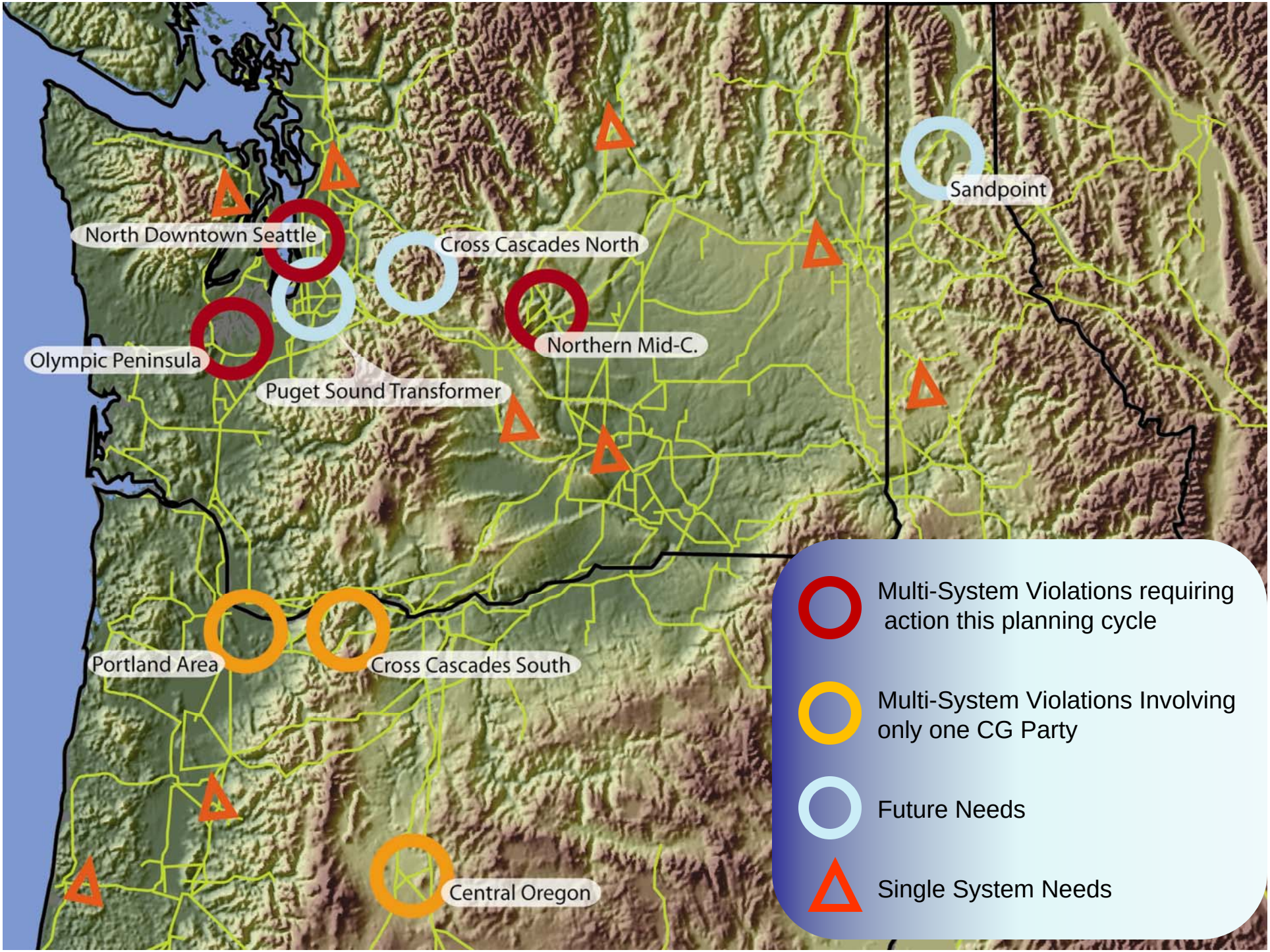
System Assessment Portion Completed

- Assessment analyzes the systems ability to meet reliability standards while serving load and meeting long term firm transmission service commitments
- Covers 10 year planning horizon
- Models only committed generation and transmission projects
- Report available at: www.columbiagrid. org


Puget Sound
Central Washington
Northeastern System
Olympic Peninsula
Western Oregon
Lower Columbia/Eastern
10,897
9192
1124
1355
2620
3122
3045
2167
12,149
9945
3268
2751
Planning Area Loads Legend
MW in 2008
MW in 2018

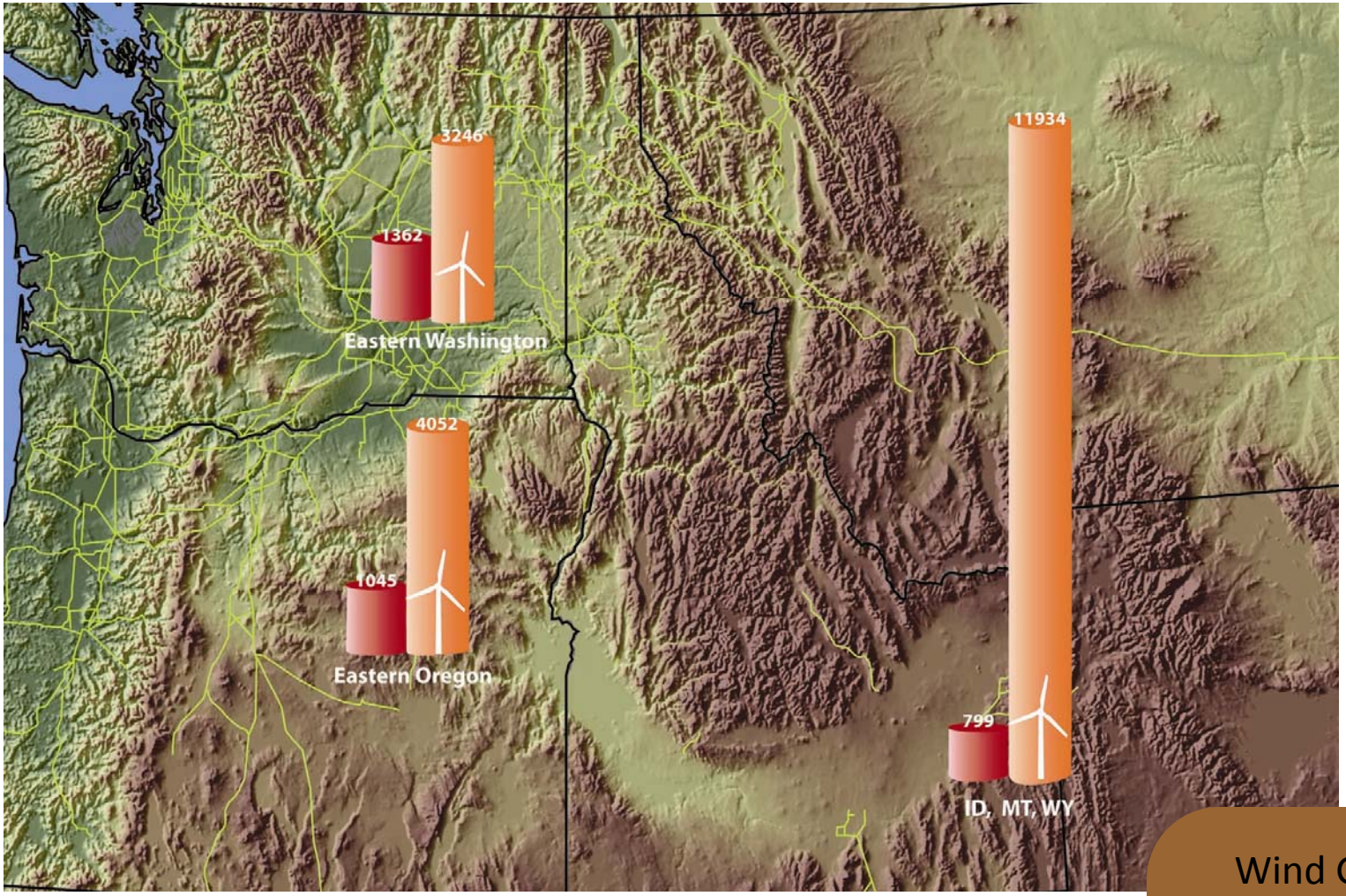
Four Categories of Results

1. Multi-system violations requiring action
2. Multi-system violations that only involve one ColumbiaGrid Party
3. Future Problems – no action required at this time
4. Single System Problems


North Downtown Seattle
Cross Cascades North
Sandpoint
Olympic Peninsula
Puget Sound Transformer
Northern Mid-C.
Portland Area
Cross Cascades South
Central Oregon
Multi-System Violations requiring action this planning cycle
Multi-System Violations Involving only one CG Party
Future Needs
Single System Needs

Planned Sensitivity Studies

- Increased wind generation
- Natural gas limitations
- Low water (limited hydro)
- Cowlitz upgrades
- California-Oregon Interties upgrades
- Centralia outage



Wind Resources

Wind Growth Legend

Operating or Under Construction

Proposed or in Queue

OASIS Program

Goal is to have single OASIS interface that spans multiple transmission systems to improve customer access to transmission service.

- New Functional Agreement effective April 1, 2008

- Participants: Avista, BPA, Chelan PUD, Grant PUD, Puget Sound Energy, Seattle City Light, Snohomish PUD, Tacoma Power

- Currently hiring staff to begin program.

OASIS Program Schedule

2008:

1. Develop common ATC methodology
2. Facilitate development of common queues for transmission service and interconnection requests
3. Develop plan for a common web-based OASIS portal

2009 and beyond:

1. Implement common OASIS portal that “points to” participants’ individual OASIS platforms.
2. Implement common ATC methodology and common queues

Outage Coordination Enhancements

•Transmission outage coordination is currently being performed by all NWPP transmission operators and, soon, by all WECC transmission operators using a common procedure and tools

•Existing outage coordination activities do not always optimize availability to meet market needs or coordinate scheduled generator outages with scheduled transmission outages

•ColumbiaGrid is hosting a collaborative process to develop methods that will enhance and improve regional outage coordination

Visibility Enhancements

- Wide Area Visibility can allow operators to see what is going on beyond their own system boundaries.
- Allows transmission planners to see actual conditions and improve their modeling and transmission plans.
- Supports data requirements for other reliability initiatives such as Redispatch

Redispatch Program

- Improves the efficient use of the grid by increasing transmission capability through the selective redispatch of generation
- Helps to bridge problems until transmission can be built
- ColumbiaGrid effort:
  - Builds on current BPA redispatch program
  - Looking to expand program across control area boundaries to include more generator participants and increase benefits
  - May implement independent intra-hour energy bid market to facilitate redispatch and act as energy balancing source. This may be particularly useful in integrating wind generation.
- Collaborative work to continue

Questions?